



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

HL

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,251	10/03/2003	Ganapati Subray Shankarling	135305-1	1986
23413	7590	12/15/2004		
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER DESAI, RITA J	
			ART UNIT 1625	PAPER NUMBER

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/678,251

Applicant(s)

SHANKARLING ET AL.

Examiner

Rita J. Desai

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) 8-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 31-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/14/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1625

### DETAILED ACTION

Application 's continuation to a PCT application is being acknowledged.

Applicants have elected group I of the restriction given in the paper mailed 10/22/2004.

The claims 25-30 were omitted by error in the previous restriction. They are drawn to a process of making compositions and would fall within the group VII , which is also drawn to making a composition .

Hence group VIII would include claims 16-30 and are drawn to a non-elected group and are hence withdrawn.

Claims pending 1-7, 31-38. Claims withdrawn 8-30.

#### *Claim Objections*

Claims 1-7 are substantially duplicates of new claims 31-37 when drawn to the elected group.

Claim 2 and claim 32 are not further limiting since the elected group are drawn to A being anthraquinonyl, naphthaquinonyl and benzanthranyl .

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for R4 being a phenyl and R1-R3 being a H or an alkyl , does not reasonably provide enablement for any aliphatic group , aromatic , heterocyclic, amino ,cyano or sulphonyl "containing" or even just these groups and also the substituents on A are not

Art Unit: 1625

described. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue". These factors include 1) the breadth of the claims, 2) the nature of the invention, 3) the state of the prior art, 4) the level of one of ordinary skill, 5) the level of predictability in the art, 6) the amount of direction provided by the inventor, 7) the existence of working examples, and 8) the quantity of experimentation needed to make or use the invention based on the content of the disclosure.

The breadth of the claims is very large and the state of the art is very unpredictable. Having large aliphatic aromatic and heterocyclic groups or even other groups containing these would change the geometric structure bonding and properties.

There is no guidance provided by the applicants to indicate that the compounds produced are not hindering to the properties. There are no working examples and hence the quantity of experimentation needed is very high and undue.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

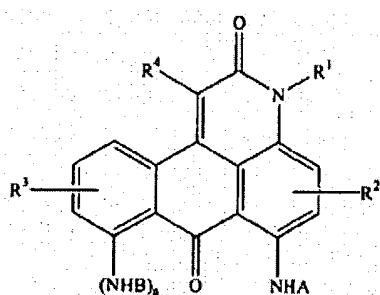
Art Unit: 1625

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US

20030051633 Blease et al and JP 5368234 and GB 1047297 Cooper et al

Applicants compounds are drawn to

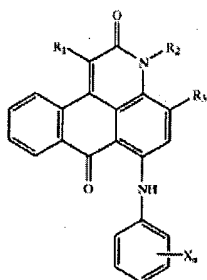


wherein a is 0, R4 is a phenyl, and A is

anthraquinonyl, naphthaquinonyl and benzanthranyl.

Determination of the scope and content of the prior art (MPEP §2141.01)

US 200030051633 teaches compounds of the formula



wherein:

R<sub>1</sub> represents hydrogen, or a substituted or unsubstituted alkoxy carbonyl, carboxyl, benzoyl, alkyl, aryl, heteraryl, alkoxy or phenoxy group;

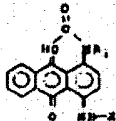
wherein R<sub>1</sub> is an aryl, which corresponds to the R<sub>4</sub> of the

instant invention.

Art Unit: 1625

JP 5368234 teaches compounds of the formula

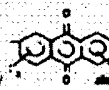
The basic structure



(In the structure X is -



Y-R3 and the portion represented by

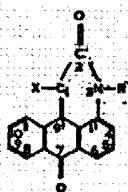


Z3 = O = Z2

Which has a H at the R4 ( applicants R4 position) , but the corresponding applicants A position , which is the X in the prior art teaches the interchangeability of a phenyl with an anthaquinonyl group. These are also coloring agents.

Cooper et al teaches the same antrapryridone core as a colouring agent too.

1. The anthrapyridone pigments of the formula:—



Finding of prima facie obviousness--rational and motivation (MPEP §2142-2413)

Thus there is a clear equivalency between the various substituents at the R4 and the A positions, hence one of skill in the art would find it prima facie obvious to make the modifications to obtain the compounds of the invention.

### Conclusion

Claims 1-7, 31-38 are not allowable.

Claims 8-30 are withdrawn.

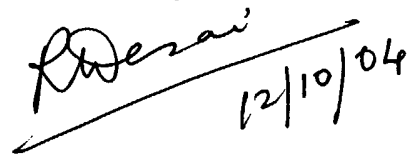
Art Unit: 1625

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita J. Desai whose telephone number is 571-272-0684. The examiner can normally be reached on Monday - Friday, 9:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia Tsang can be reached on 571-272-0562. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rita J. Desai  
Primary Examiner  
Art Unit 1625

A handwritten signature, likely of Rita J. Desai, is written over a diagonal line. To the right of the signature, the date "12/10/04" is handwritten.

R.D.  
December 10, 2004